2003 IRC

RESIDENTIAL CODE AMENDMENTS

Ordinance No. 3505

Adopted June 17, 2003

Effective September 16, 2003

PLANNING & DEVELOPMENT
SERVICES DEPARTMENT

ORDINANCE
NO. 3505

AN ORDINANCE OF THE COUNCIL OF THE CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA, AMENDING CHAPTER 31, ARTICLE III OF THE SCOTTSDALE REVISED CODE, RELATING TO THE BUILDING CODE, ADOPTING THE 2003 EDITION OF THE "INTERNATIONAL BUILDING CODE", INCLUDING APPENDICES, THE 2003 EDITION OF THE "INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS", INCLUDING APPENDICES, AND THE ARIZONANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES; AND ADOPTING REVISIONS THERETO.

BE IT ORDAINED by the City Council of the City of Scottsdale, Arizona, as follows:

Section 1. Section 31-31 of the Scottsdale Revised Code is hereby repealed and replaced by a new Section 31-31, which shall read as follows:

Sec. 31-31. Adoption.

The following documents are adopted by reference and shall be the building code of the city. Three (3) copies of each shall at all times remain in the office of the city clerk and be open to inspection.

1) The International Building Code, 2003 Edition, as published by the International Code Council, Inc., declared a public record by Resolution #6310 of the City of Scottsdale, is hereby referred to, adopted and made a part hereof as if fully set out in this ordinance

2) The International Residential Code for One- and Two-Family Dwellings, 2003 Edition, as published by the International Code Council, Inc., declared a public record by Resolution #6311 of the City of Scottsdale, is hereby referred to, adopted and made a part hereof as if fully set out in this ordinance.

3) Those documents known as “Arizonans with Disabilities Act” (Arizona Revised Statutes Section 41-1492.03) and the Act’s implementing rules (R 10-3-403 and R 10-3-404, which includes 28 CFR Part 35, and 28 CFR 36 and the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)”), declared a public record by Resolution #6312 of the City of Scottsdale, and hereby referred to, adopted and made a part hereof as if fully set out in this ordinance.

Section 2. Section 31-32 of the Scottsdale Revised Code is hereby repealed and replaced by a new Section 31-32, which shall read as specified in that certain document entitled “City of Scottsdale Amendments to the International Building Code, 2003 Edition,” declared to be a public record by Resolution #6313of the City of Scottsdale, and hereby referred to, adopted and made a part hereof as if fully set out in this Ordinance.

Section 3. Article VIII, Public Accommodations for Handicapped, of Chapter 31 of the Scottsdale Revised Code, including sections 31-201 through 31-236, is hereby repealed.

Section 4. Any person found guilty of violating this Ordinance shall, in addition to any other applicable penalty, is subject to the following:

105.6 Suspension or revocation. The building official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code.

110.4 Revocation. The building official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

113.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

117.7 Revocation of Registration. The building official may suspend or revoke a registration when the registrant fails to comply with any of the registration responsibilities or for violation of any provision of this code. When the building official deems that the registration shall be suspended or revoked, The registrant will be notified in writing by certified mail at least seven days prior to suspension or revocation. The registrant may appeal to the Building Advisory Board of Appeals within 30 days after notice of suspension or revocation.

Section 5. The repeal of any provision of the Scottsdale Revised Code effectuated by this Ordinance does not affect the rights and duties that matured or penalties that were incurred and proceedings that were begun before the effective date of this Ordinance.

Section 6. If any section, subsection, sentence, clause, phrase or portion of this ordinance or any part of these amendments to the Building Codes adopted herein by reference is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdictions, such decision shall not affect the validity of the remaining portions thereof. If there is any conflict or inconsistency between the provisions of this ordinance, the more restrictive provisions apply.

Section 7. The effective date of this ordinance shall be September 15, 2003.

PASSED AND ADOPTED BY THE Council of the City of Scottsdale, Maricopa County, Arizona this ___ day of June, 2003.

ATTEST:

CITY OF SCOTTSDALE
A municipal corporation

_____
Sonia Robertson
City Clerk

_____
Mary Manross
Mayor

APPROVED AS TO FORM:

_____
David A. Pennartz
City Attorney

2) The International Residential Code, 2003 Edition, adopted by section 31-31 is amended in the following respects:

Delete Chapter 1, Administration, and substitute the following:

Refer to Chapter one of the amended International Building Code, 2003 Edition, for administrative provisions.

Appendices. Provisions in the appendices shall not apply unless specifically referenced in the adopting ordinance. The following appendices are adopted:

APPENDIX A SIZING AND CAPACITIES OF GAS PIPING
APPENDIX B SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES, AND APPLIANCES LISTED FOR USE AND TYPE B VENTS
APPENDIX C EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS
APPENDIX D RECOMMENDED PROCEDURE FOR SAFETY INSPECTION OF AN EXISTING APPLIANCE INSTALLATION
APPENDIX G SWIMMING POOLS, SPAS AND HOT TUBS
APPENDIX H PATIO COVERS
APPENDIX J EXISTING BUILDINGS AND STRUCTURES
APPENDIX K SOUND TRANSMISSION

Section R201.4 is amended to read as follows:

R201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies. Webster's Third New International Dictionary of the English Language, Unabridged, shall be considered as providing ordinarily accepted meanings.

Section R301.1 is amended to read as follows:

R301.1.1 Alternative provisions. As an alternative to the requirements in Section R301.1 with prior approval of the building official the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards the design shall comply with the *International Building Code.*

1. American Forest and Paper Association (AF&PA)
Wood Frame Construction Manual (WFCM).

2. American Iron and Steel Institute (AISI), *Standard for Cold-Formed Steel Framing-Prescriptive Method for One- and Two-family Dwellings* (COFS/PM).

Complete Table R301.2(1) as follows:

The requirements of IRC Table R301.2(1) are as follows:

Ground snow load:	0
Wind speed :	90
Seismic design category :	C
Weathering :	negligible
Frost line depth :	12 inches
Termite :	moderate to heavy
Decay :	none to slight
Winter design temp :	34 degrees

Delete all other headings

Revise Table R301.5 as follows:

TABLE R301.5
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS
(In pounds per square foot)

USE	LIVE
Attics with storage [b,e]	40
Sleeping rooms	40

All other values to remain unchanged.

Section R303.2, Adjoining rooms, is amended by adding the following sentence :

Bathrooms, kitchens and laundry rooms are not permitted to be ventilated through an adjoining room. Exhaust must be directly to the exterior.

Section R303.3 is amended to read as follows:

R303.3 Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.279 m2), ~~one-half of which must be openable.~~ A mechanical ventilation system shall be provided. The minimum ventilation rates shall be 50 cfm (23.6 L/s) for intermittent ventilation or 20 cfm (9.4 L/s) for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.

> **Exception:** The glazed areas shall not be required where artificial light ~~and a mechanical ventilation system are~~ is provided. ~~The minimum ventilation rates shall be 50 cfm (23.6 L/s) for intermittent ventilation or 20 cfm (9.4 L/s) for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.~~

Section R303.8 is amended to read as follows:

R303.8 Equipment and systems. Interior spaces intended for human occupancy shall be provided with active or passive ~~space-heating~~ heating and cooling systems capable of maintaining ~~a minimum~~ indoor temperature ~~of~~ between 68°F (20°C) and 80°F at a point 3 feet (914 mm) above the floor on the design heating day.

Exception: Interior spaces where the primary purpose is not associated with human comfort. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

Section R305.1 is amended to read as follows:

R305.1 Minimum height. Habitable Rooms shall have a ceiling height of 7 feet 6 inches (2286 mm). Hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than 7 feet (2134 mm).

Exceptions:

1. Beams and girders spaced not less than 4 feet (1219 mm) on center may project not more than 6 inches (152 mm) below the required ceiling height.

2. Ceilings in basements without habitable spaces may project to within 6 feet, 8 inches (2032 mm) of the finished floor; and beams, girders, ducts or other obstructions may project to within 6 feet, 4 inches (1931 mm) of the finished floor.

Not more than 50 percent of the required floor area of a room or space is permitted to have a sloped ceiling less than 7 feet (2134 mm) in height with no portion of the required floor area less than 5 feet (1524 mm) in height.

4. Bathrooms shall have a minimum ceiling height of 6 feet 8 inches (2036 mm) over the fixture ~~and at the front clearance area for fixtures as shown in Figure R307.2~~. A shower or tub equipped with a showerhead shall have a minimum ceiling height of 6 feet 8 inches (2036 mm) above a minimum area 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.

Section R309.1 is amended to read as follows:

R309.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than $1^3/_8$ inch (35 mm) in thickness, solid or honeycomb core steel doors not less than $1^3/_8$ inches (35 mm) thick, or 20-minute fire-rated doors. Doors providing opening protection shall be maintained self-closing and self-latching.

Section R309.2 is amended to read as follows:

R309.2 Separation required. The garage shall be separated from the residence and its attic area by not less than $^1/_2$-inch (12.7 mm) gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than $^5/_8$-inch (15.9 mm) Type X gypsum board or equivalent. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than $^1/_2$-inch (12.7 mm) gypsum board or equivalent.

In buildings protected with an automatic fire sprinkler system, including the private garage, the separation shall be permitted to be limited to a minimum $^1/_2$-inch (12.7 mm) gypsum board applied to the garage side.

Section R310.1 is amended by adding the following sentence:

Such openings shall open directly into a public street, public alley, yard or court. The access route to the emergency escape and rescue opening shall comply with the requirements of Section R310.

Section R311.4.3, Landings at doors, is amended to read as follows:

R311.4.3 Landings at doors. There shall be a floor or landing on each side of each exterior door.

> **Exception:** Where a stairway of two or fewer risers is located on the exterior side of a door, other than the required exit door, a landing is not required for the exterior side of the door.

The floor or landing at the exit door required by Section R311.4.1 shall not be more than 1.5 inches (38 mm) lower than the top of the threshold. The floor or landing at exterior doors other than the exit door required by Section R311.4.1 shall not be required to comply with this requirement but shall have a rise no greater than ~~that permitted in Section R311.5.3~~ 4 inches (101 mm) .

> **Exception:** The landing at an exterior required exit doorway shall not be more than ~~7 ¾ inches (196 mm)~~ 4 inches (101 mm) below the top of the threshold, provided that the door, other than an exterior storm or screen door, does not swing over the landing.

The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel.

Section R313.1 is amended by adding the following item:

4. Where the ceiling height of a room open to the hallway servicing bedrooms exceeds that of the opening to the hallway by 24 inches or more, smoke detectors shall be installed in the hallways and in the adjacent room.

Section R317.1 is amended to read as follows:

R317.1 Two-family dwellings. Dwelling units in non-sprinkled two-family dwellings shall be separated from each other by wall and/or floor assemblies having not less than 1-hour fire-resistive rating when tested in accordance with ASTM E 119. Fire-resistance rated floor-ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend to the underside of the roof sheathing.

Exception: A fire resistance rating of ½ hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with ~~NFPA 13~~ the fire code, the separation between residences and between their attic areas shall be by not less than 1/2-inch (12.7 mm) gypsum board applied to each side.

R317.1.1 Supporting construction. When floor assemblies are required to be fire-resistance-rated by Section R317.1, the supporting construction of such assemblies shall have an equal or greater fire-resistive rating.

Section R320.1 Subterranean termite control. is amended to read as follows:

R320.1 Subterranean termite control. In ~~areas favorable to termite damage as established by Table R301.2(1)~~, the City of Scottsdale methods of protection shall be by chemical soil treatment, pressure preservatively treated wood in accordance with the AWPA standards listed in Section R323.1, naturally termite-resistant wood or physical barriers (such as metal or plastic termite shields), or any combination of these methods.

Add Section R324 as follows:

R324 Automatic Fire-extinguishing Systems. In all occupancies an automatic sprinkler system shall be installed in accordance with the city fire code:

Exceptions:

1. Gazebos and ramadas for residential and public use.
2. Independent restroom buildings that associated with golf courses, parks and similar uses.
3. Guardhouses with 120 square feet or less floor area for residential and commercial developments.
4. Detached carports for residential developments.
5. Barns and agricultural buildings for private, residential, non-commercial use, not exceeding 1500 square feet.
6. Detached storage sheds for private, residential, non-commercial use, not exceeding 1500 square feet.
7. Detached 1, 2 and 3 car garages (without habitable spaces) in existing R-3 developed parcels which contain existing non-sprinklered sub-division requirements (i.e. 700 foot hydrant spacing).
8. For fuel dispensing canopies see the Fire Code.
9. Open shade horse stalls of non-combustible construction for private, residential, non-commercial use, not exceeding 5,000 square feet and no storage of combustible products, vehicles or agricultural equipment.
10. Additions, alterations, or repairs of existing unsprinkled buildings or structures when the value of work is ten (10) percent or less of the value of an existing building of assembly use or twenty-five (25) percent or less of the value of an existing building or structure of other occupancies within a twelve month period.

Table R403.1 is revised to read as follows:

TABLE R403.1
MINIMUM WIDTH OF CONCRETE FOOTINGS (inches)[1, 2, 3]

	LOAD-BEARING VALUE OF SOIL (psf)					
	1,500	2,000	2,500	3,000	3,500	4,000
Conventional light-frame construction						
1-story	16	12	10	8	7	6
2-story	19	15	12	10	8	7
3-story	22	17	14	11	10	9
4-inch brick veneer over light frame or 8-inch hollow concrete masonry						
1-story	19	15	12	10	8	7
2-story	25	19	15	13	11	10
3-story	31	23	19	16	13	12
8-inch solid or fully grouted masonry						
1-story	22	17	13	11	10	9
2-story	31	23	19	16	13	12
3-story	40	30	24	20	17	15

Number of Floors Supported by the Foundation.[3]	Thickness of Foundation Wall (inches - **Nominal Dimension**)		Width of Footing (W) (inches)		Thickness of Footing (inches)		Depth Below Undisturbed Soil (inches)	
	Stud Wall							
	Concrete	Unit Masonry	Stud Wall[1]	Masonry Wall	Stud Wall	Masonry Wall	Stud Wall	Masonry Wall
1	6	6	16	16	6	8	18	18
2	8	8	16	20	8	8	18	18

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kN/m2.

1. Interior stud bearing walls may be supported by isolated footings. The footing width and length shall be twice the width shown in this table and the footings shall be spaced not more than 6 feet (1,829mm) on center.
2. A minimum of two (2) #4 reinforcing bars (minimum grade 40) are required in the footing/stem concrete. If metal hold downs are used, one #4 horizontal reinforcing bar must be placed within the top 6" of the stem wall.
3. Foundations may support a roof in addition to the stipulated number of floors. Foundations supporting roofs only shall be as required for supporting only one floor.
4. Isolated columns carrying loads in excess of 750 lbs shall be supported on minimum 4 square feet of footing, with minimum width of 24 inches. Maximum bearing pressure from service loads shall not exceed 1500 psf unless recommended by the soils report.

Revise figure R403.1.7.1 as follows :

Replace figure R403.1.7.1 Foundation clearances from slopes with IBC figure 1805.3.1 foundation clearances from slopes.
Revise Top of Slope Note to read:

H/3 or 1.5 times footing width (whichever is greater,) but need not exceed 40 ft. max.

Section R403.1.9 is added to read as follows:

Section R403.1.9 Pipes through footings or foundation walls. Any pipe that passes under a footing or through a foundation wall shall be provided with a relieving arch; or there shall be built into the masonry wall a pipe sleeve two pipe sizes greater than the pipe passing through.

Section R602.3.2 is amended to read as follows:

R602.3.2 Top plate. Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and intersections with bearing partitions. End joints in top plates shall be offset at least ~~24 inches (610 mm)~~ 48 inches (1220 mm). Plates shall be a nominal 2 inches in depth (51 mm) and have a width at least equal to the width of the studs.

Figure R602.3(2)FRAMING DETAILS, the note in the upper right corner is revised to read:

STAGGER ~~JOISTS 24 IN.~~ JOINTS 48 IN. OR USE SPLICE PLATES- SEE SECTION R602.3.2

Table R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS, under the column entitled "DESCRIPTION OF BUILDING ELEMENTS", change the tenth line to read:

Double top plates, minimum ~~24-inch~~ 48-inch offset of end joints, face nail in lapped area

Revise Table R702.3.5 as follows:

In column with heading "THICKNESS OF GYPSUM BOARD (inches)", Delete reference to 3/8.

Add Section R1000, Clean Burning Fireplaces, to read:

SECTION R1000
CLEAN BURNING FIREPLACES

R1000.1 Clean Burning Fireplaces. The purpose of this Standard is to regulate fireplaces, woodstoves, or other solid-fuel burning devices to reduce the amount of air pollution caused by particulate matter and carbon monoxide.

The effective date of the regulations and prohibitions set forth in this Standard took effect on December 31, 1998.

Definitions: For purposes of this Standard, the following words and terms shall be defined as follows:

FIREPLACE means a built in place masonry hearth and fire chamber or a factory-built appliance, designed to burn solid fuel or to accommodate gas or electric log insert or similar device, and which is intended for occasional recreational or aesthetic use, not for cooking, heating, or industrial processes.

SOLID FUEL includes but is not limited to wood, coal, or other nongaseous or non-liquid fuels, including those fuels defined by the Maricopa County Air Pollution Control Officer as "inappropriate fuel" to burn in residential wood-burning devices.

WOODSTOVE means a solid-fuel burning heating appliance including a pellet stove, which is either freestanding or designed to be inserted into a fireplace.

Installation Restrictions:

a) On or after the effective date, no person, firm or corporation shall construct or install a fireplace or a woodstove, and the Building Official shall not approve or issue a permit to construct or install a fireplace or a woodstove, unless the fireplace or woodstove complied with one of the following:

1. A fireplace which has a permanently installed gas or electric log insert.
2. A fireplace, woodstove, or other solid-fuel burning appliance which has been certified by the United States Environmental Protection Agency as conforming to 40 Code of Federal Regulations Part 60, Subpart AAA as in effect on July 1, 1990.
3. A fireplace, woodstove or other solid-fuel burning appliance which has been tested and listed by a nationally recognized testing agency to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, Subpart AAA as in effect on July 1, 1990.
4. A fireplace, woodstove or other solid-fuel burning appliance which has been determined by the Maricopa County Air Pollution Control Officer to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, Subpart AAA as in effect on July 1, 1990.
5. A fireplace which has a permanently installed woodstove insert which complies with subparagraphs 2, 3, or 4 above.

b) The following installations are not regulated by this Standard and are not prohibited by this Standard:

1. Furnace, boilers, incinerators, kilns, and other similar space heating or industrial process equipment.
2. Cook-stoves, barbecue grills, and similar appliances designed primarily for cooking.
3. Fire pits, barbecue grills, and other outdoor fireplaces.

Fireplace or Woodstove Alterations Prohibited:

a) On or after the effective date, no person, firm or corporation shall alter or remove a gas or electric log insert or a woodstove insert from a fireplace for purposes of converting the fireplace to directly burn wood or other solid fuel.

b) On or after the effective date, no person, firm or corporation shall alter a fireplace, woodstove or other solid fuel burning appliance in any manner that would void it's certification or operational compliance with the provisions of this Standard.

Permits Required:
In addition to the provisions and restrictions of this Standard, construction, installation or alternation of all fireplaces, woodstoves and other gas, electric or solid-fuel burning appliances and equipment shall be done in compliance with provisions of the Construction Code and shall be subject to the permits and inspections required by the Construction Code.

Add the following items to Section N1101.2.1 :

3. Compliance may be demonstrated by complying with one of the Packages entitled "Zone 3 Single- Family Prescriptive Packages - 2000/2003 IECC" (these packages are available for download at http://www.energycodes.gov
or
For any detached one- and two-family dwelling, compliance may be demonstrated by participation in the Energy Star, Engineered for Life, Environments for Living or other such nationally recognized third party energy program approved by the building official.
or
participation in the City of Scottsdale’s Green building program.

Revise Table N1102.1, "Simplified Prescriptive Building Envelope Thermal Component Criteria", as follows:

Scott	**MAXIMUM GLAZING U-FACTOR**	Maximum Glazing Solar Heat Gain Coefficient (Shgc)	**MINIMUM INSULATION *R*-VALUE [(hr·ft^2·ºF)/Btu]**					
			Ceilings	**Walls**	**Floors** (above uncon-ditioned space)	**Basement walls**	**Slab perimeter *R*-value and depth**	**Crawl space walls**
15 % glazing or less	0.60	0.40	R-30	R-13	R-19	R-8	R-0	R-0
25 % glazing or less	0.45	0.40	R-38	R-19	R-19	R-8	R-5 Full depth of stem	R-5 Full depth of stem

Section M1307.3 is amended to read as follows:

M1307.3 Elevation of ignition source. Appliances having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor in garages. For the purpose of this section, rooms or spaces that are not part of the living space of a dwelling unit and that communicate with a private garage through openings shall be considered to be part of the private garage.

Exception: Clothes dryers installed in private garages.

Add the following Section M1307.6.:

M1307.6 Liquefied Petroleum Appliances. LPG appliances shall not be installed in an attic, pit or other location that would cause a ponding or retention of gas.

Section M1601.3.2, Support, add a third sentence to read:

Registers, grilles and diffusers shall be mechanically fastened to rigid supports or structural members on at least two opposite sides in addition to being connected to the ductwork they serve.

Section M1701.4 is amended to read as follows:

M1701.4 Prohibited sources. Combustion air ducts and openings shall not connect appliance enclosures with space in which the operation of a fan may adversely affect the flow of combustion air. Combustion air shall not be obtained from an area in which flammable vapors present a hazard. Fuel-fired appliances shall not obtain combustion air from any of the following rooms or spaces:

1. Sleeping rooms.
2. Bathrooms.
3. Toilet rooms.

Exception: The following appliances shall be permitted to obtain combustion air from sleeping rooms, bathrooms and toilet rooms:

1. ~~Solid fuel-fired appliances provided that the room is not a confined space and the building is not of unusually tight construction.~~
2. ~~2.~~ Appliances installed in an enclosure in which all combustion air is taken from the outdoors and the enclosure is equipped with a solid weatherstripped door and self-closing device.

Section M1702.2 is amended to read as follows:

M1702.2 Confined space. Where the space in which the appliance is located does not meet the criterion specified in Section M1702.1, two permanent openings to adjacent spaces shall be provided so that the combined volume of all spaces meets the criterion. The top edge of one opening shall be within 12 inches (305 mm) of the top and the bottom edge of one within 12 inches (305 mm) of the bottom of the space, as illustrated in Figure M1702.2. Each opening shall have a free area equal to a minimum of 1 square inch per 1,000 Btu/h (2.20 mm2/W) input rating of all appliances installed within the space, but not less than 100 square inches (0.064 m2).

Section M1703.2 is amended to read as follows:

M1703.2 Two openings or ducts. Outside combustion air shall be supplied through openings or ducts, as illustrated in Figures M1703.2(1), M1703.2(2), M1703.2(3) and M1703.2(4). The top edge of one opening shall be within 12 inches (305mm) of the top of the enclosure, and the bottom edge of one within 12 inches (305mm) of the bottom of the enclosure. For LPG appliances, any duct serving the lower opening shall be at the floor level and slope to the outdoors without traps or pockets. Openings are permitted to connect to spaces directly communicating with the outdoors, such as ventilated crawl spaces or ventilated attic spaces. The same duct or opening shall not serve both combustion air openings. The duct serving the upper opening shall be level or extend upward from the appliance.

Delete SECTION M2006.2 Location. in its entirety.

Section G2415.9 is amended to read as follows:

G2415.9 (404.9) Minimum burial depth. Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade, for metal, and 18 inches for plastic ~~except as provided for in Section G2414.9.1.~~

Delete Section G2415.9.1.

Add the following paragraph to Section G2425.8 (501.8) Equipment not required to be vented.

Oxygen-depletion safety system. Unvented room heaters shall be equipped with an oxygen-depletion-sensitive safety shutoff system. The system shall shut off the gas supply to the main and pilot burners when the oxygen in the surrounding atmosphere is depleted to the percent concentration specified by the manufacturer, but not lower than 18 percent. The system shall not incorporate field adjustment means capable of changing the set point at which the system acts to shut off the gas supply to the room heater. The aggregate input rating of such appliances and equipment installed within the room or space shall not exceed 40 KBtu per hour.

Chapters 25 through 32 are deleted. Refer to the Mechanical Code and Plumbing Code for plumbing requirements.

Table E3503.1 is revised to read:

Table E3503.1 Conductor Types and Sizes for 120/240-Volt and 120/208-Volt, 3-Wire, Single-Phase Dwelling Services and Feeders. Conductor Types RH, RHH, RHW, RHW-2, THHN, THHW, THW, THW-2, THWN, THWN-2, XHHW, XHHW-2, SE, USE, USE-2

Conductor					
Copper (AWG or kcmil)	Aluminum or Copper-Clad Aluminum	Service or Feeder Rating (Amperes) ≤ 30°C	> 30°C	Min. Ground Conductor [a] Copper	Alum
4	2	100	----	8[b]	6[c]
3	1	110	----	8[b]	6[c]
2	1/0	125	100	8[b]	6[c]
1	2/0	150	125	6[c]	4
1/0	3/0	175	150	6[c]	4
2/0	4/0	200	175	4[d]	2[d]
3/0	250	225	200	4[d]	2[d]
4/0	300	250	225	2[d]	1/0[d]
250	350	300	250	2[d]	1/0[d]
350	500	350	300	2[d]	1/0[d]
400	600	400	350	1/0[d]	3/0[d]

CAUTION - UTILITY COMPANY CONDUCTOR SIZE REQUIREMENTS MAY VARY. CONSULT WITH SERVING UTILITY PRIOR TO INSTALLATION.

a. Where protected by a metal raceway, grounding electrode conductors shall be electrically bonded to the metal raceway at both ends.
b. No. 8 grounding electrode conductors shall be protected with metal conduit or nonmetallic conduit.
c. Where not protected, No. 6 grounding electrode conductors shall closely follow a structural surface for physical protection. The supports shall be spaced not more
than 24 inches on center and shall be within 12 inches of any enclosure or termination.
d. Where the sole grounding electrode system is a ground rod or pipe as covered in Section E3508.2, the grounding electrode conductor shall not be required to be
larger than No. 6 copper or No. 4 aluminum. Where the sole grounding electrode system is the footing steel as covered in Section E3508.1.2, the grounding electrode
conductor shall not be required to be larger than No. 4 copper conductor.

Add the following sentence to Section E3601.1 :

Aluminum conductors are not allowed for branch circuits.

Section E3603.2 is amended to read as follows:

E3603.2 Kitchen and dining area receptacles. A minimum of two 20-ampere-rated branch circuits shall be provided to serve receptacles located in the kitchen, pantry, breakfast area, dining area or similar area of a dwelling. The kitchen countertop receptacles shall be served by a minimum of two 20-ampere-rated branch circuits, either or both of which shall also be permitted to supply other receptacle outlets in the kitchen, pantry, breakfast area and dining area.

Section E3801.11 is amended to read as follows:

E3801.11 HVAC outlet. A 125-volt, single-phase, 15 or 20 ampere rated convenience receptacle outlet shall be installed for the servicing of heating, air-conditioning and refrigeration equipment ~~located in attics and crawl spaces~~. The receptacle shall be accessible and shall be located on the same level and within 25 feet (7620 mm)of the heating, air-conditioning and refrigeration equipment. The receptacle outlet shall not be connected to the load side of the HVAC equipment disconnecting means and shall be protected in accordance with Section E3802.4.

Section E3808.8 is amended to read as follows:

E3808.8 Types of Equipment Grounding Conductors. The equipment grounding conductor run with or enclosing the circuit conductors shall be one or more or a combination of the following:

1. A copper or other corrosion-resistant conductor. This conductor shall be solid or stranded; insulated, covered, or bare; and in the form of a wire or a busbar of any shape.
2. Rigid metal conduit.
3. Intermediate metal conduit.
4. Electrical metallic tubing with an individual equipment grounding conductor.
5. Flexible metal conduit with an individual equipment grounding conductor and where both the conduit and fittings are listed for grounding.
6. Armor of Type AC cable with an individual equipment grounding conductor.
7. Surface metal raceway.
8. Metal-clad cable, where both the cable and fittings are listed for grounding.
9. Liquidtight flexible metal conduit with an individual equipment grounding conductor and terminated with fittings listed for grounding.

Delete Appendix G in its entirety and substitute the following to read:

AG101
GENERAL

AG101.1 - General The provisions of this section apply to the design and construction of barriers for swimming pools located on the premises of Group R, Division 3 Occupancies.

AG101.2 Standards of Quality. In addition to the other requirements of this code, safety covers for pools and spas shall meet the requirements of ASTM F 1346, Standard Performance Specification for Safety Covers and Labeling Requirement for All Covers for Swimming Pools, Spas and Hot Tubs

AG102 - DEFINITIONS
For the purpose of this section, certain terms, words and phrases are defined as follows:

ABOVEGROUND/ON-GROUND POOL. See definition of "swimming pool."

BARRIER is a fence, wall, building wall or combination thereof that completely surrounds the swimming pool and obstructs access to the swimming pool.

GRADE is the underlying surface, such as earth or a walking surface.

HOT TUB. See definition of "spa, non-self-contained" and "spa, self-contained."

IN-GROUND POOL. See definition of "swimming pool." **SEPARATION FENCE** is a barrier that separates all doors of a dwelling unit with direct access to a swimming pool from the swimming pool.

SPA, NONSELF-CONTAINED, is a hydro-massage pool or tub for recreational or therapeutic use, not located in health-care facilities, designed for immersion of users and usually having a filter, heater and motor-driven blower. It may be installed indoors or outdoors, on the ground or on a supporting structure, or in the ground or in a supporting structure. A non-self-contained spa is intended for recreational bathing and contains water over **18** inches (**457** mm) deep.

SPA, SELF-CONTAINED, is a continuous-duty appliance in which all control, water-heating and water-circulating equipment is an integral part of the product, located entirely under the spa skirt. A self-contained spa is intended for recreational bathing and contains water over 24 inches (610 mm) deep.

SWIMMING POOL is any structure intended for swimming or recreational bathing that contains water over **18** inches (**457** mm) deep. This includes in-ground, aboveground and on-ground swimming pools, and fixed-in-place wading pools.

SWIMMING POOL, INDOOR, is a swimming pool that is totally contained within a residential structure and surrounded on all four sides by walls of said structure.

SWIMMING POOL, OUTDOOR, is any swimming pool that is not an indoor pool.

AG103 – BARRIER REQUIREMENTS

AG103.1 - Outdoor Swimming Pool. An outdoor swimming pool shall be provided with a barrier that shall be installed, inspected and approved prior to plastering or filling with water. The barrier shall comply with the following:

1. The top of the barrier shall be at least **60** inches (**1524** mm) above grade measured on the side of the barrier that faces away from the swimming pool. The top of a barrier that separates the

pool only from habitable spaces on the same property shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance at the bottom of the barrier may be increased to 4 inches (102 mm) when grade is a solid surface such as a concrete deck, or when the barrier is mounted on the top of the aboveground pool structure. When barriers have horizontal members spaced less than 45 inches (1143 mm) apart, the horizontal members shall be placed on the pool side of the barrier. Any decorative design work on the side away from the swimming pool, such as protrusions, indentations or cutouts, which render the barrier easily climbable, is prohibited.

Where common fences on adjacent property lines of existing developed lots serve as the barrier, the height may be measured on the side that faces the swimming pool. The pool side of the barrier shall be not less than 20 inches from the edge of the water.

2. Openings in the barrier shall not allow passage of a 13/4-inch-diameter (44.5 mm) sphere.

> **Exceptions:** a. When vertical spacing between such openings is 45 inches (1143 mm) or more, the opening size may be increased such that the passage of a 4-inch-diameter (102 mm) sphere is not allowed.
> b. For fencing composed of vertical and horizontal members, the spacing between vertical members may be increased up to 4 inches (102 mm) when the distance between the tops of horizontal members is 45 inches (1143 mm) or more.

3. Chain link fences used as the barrier shall not be less than 11 gage.

4. Where access gates are provided, they shall comply with the requirements of Items 1 through 3. Pedestrian access gates shall be self-closing and have a self-latching device. Where the release mechanism of the self- latching device is located less than 54 inches (1372 mm) from the bottom of the gate, (1) the release mechanism shall be located on the pool side of the barrier at least 3 inches (76 mm) below the top of the gate, and (2) the gate and barrier shall have no opening greater than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism. Pedestrian gates shall swing away from the pool. Any gates other than pedestrian access gates shall be equipped with lockable hardware or padlocks and shall remain locked at all times when not in use.

5. Where a wall of a Group R, Division 3 Occupancy dwelling unit serves as part of the barrier and contains door openings between the dwelling unit and the outdoor swimming pool that provide direct access to the pool, a separation fence meeting the requirements of Items 1, 2, 3 and 4 of Section AG103.1 shall be provided.

> **Exception:** One of the following may be used in lieu of a separation fence:
> a. Self-closing and self-latching devices installed on all doors with direct access to the pool with the release mechanism located a minimum of 54 inches (1372 mm) above the floor.
> b. An alarm installed on all doors with direct access to the pool.
> The alarm shall sound continuously for a minimum of 30 seconds within seven seconds after the door and its screen, if present, are opened, and be capable of providing a sound pressure level of not less than 85 dba when measured indoors at 10 feet (3048 mm). The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as a touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last no longer than 15 seconds. The deactivation switch shall be located at least 54 inches (1372 mm) above the threshold of the door.
> c. Other means of protection may be acceptable so long as the degree of protection afforded is not less than that afforded by any of the devices described above.

6. Where an aboveground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then (1) the ladder or

steps shall be capable of being secured, locked or removed to prevent access or (2) the ladder or steps shall be surrounded by a barrier that meets the requirements of Items 1 through 5. When the ladder or steps are secured, locked or removed, any opening created shall be protected by a barrier complying with Items 1 through 5.

7. A pool safety cover which complies with ASTM F 1346-91 may be used to meet the requirements of Items 1 through 6 above for barrier protection between the dwelling unit and swimming pool provided all other portions of the perimeter fencing around the yard are installed and maintained as required. If switching devices are used for operation of the pool safety cover, they shall be key-operated, locked away, or otherwise located in an inaccessible location. An inaccessible location shall be at a height of at least 54 inches above the deck or adjacent ground level and where the entire pool can be visually inspected during cover operation.

8. The building official may grant an exception to the above barrier requirements when it is determined that there is a natural barrier existing on the premises in the form of thorny/spiny vegetation, landscaping, or topography which prevents access to the pool area. An exception may also be granted for barrier protection between the dwelling unit and swimming pool when such protection precludes access by a disabled adult resident.

AG103.2 - Requirements Indoor Swimming Pool. For an indoor swimming pool, protection shall comply with the requirements of Section 103.1 , Item 5.

AG104 - Spas and Hot Tubs. For a non-self-contained and self-contained spa or hot tub, protection shall comply with the requirements of Section 103.1 .

Exception: A self-contained spa or hot tub equipped with a listed safety cover shall be exempt from the requirements of Section 103.1 .

AG105 Responsibility of Builder/Installer. In the case of new swimming pool, spa, or hot tub construction, it shall be the responsibility of the builder/installer to inform the pool owner of the above barrier requirements. Violations shall be remedied in accordance with Section 31-33 of the Scottsdale Revised Code.

AG106 Responsibility of Owner/Tenant. It is the responsibility of the property owner and any other person in responsible charge of a swimming pool to ensure that the required swimming pool barrier, including all gates, doors, locks, alarms, and latches are maintained in safe and good working order at all times. No person shall alter or remove any portion of a swimming pool barrier except to repair, reconstruct, or replace the barrier in compliance with the provisions of this chapter.

AG107 Nuisance and Property Maintenance. Swimming pools, spas, and hot tubs constructed after the enactment of this chapter which are not enclosed or protected by a barrier as required in Section 103.1 are hereby declared to be unsafe and nuisance, and shall be resolved by the Code Enforcement Unit of the Citizen & Neighborhood Resources Department under the procedures outlined in Chapter 18 of the Scottsdale Revised Code.

(End Of Amendments)